Smith files
Central Reference File
No. 0.73
X 12.112
FOREST SERVICE
RECEIVED
APR 4 - 1947
RESEARCH
INTERMOUNTAIN

Research Note

NORTHERN ROCKY MOUNTAIN
FOREST AND RANGE EXPERIMENT STATION

Missoula, Montana

No. 48 March 7, 1947

OBSERVATIONS ON DEER AND HUNTERS IN THE FISHER RIVER DISTRICT, MONTANA

By Lowell Adams,[1] Biologist
U. S. Fish and Wildlife Service

Reports on deer hunting too often are based only upon the impressions and comments of individual hunters. Factual data, such as numbers of deer killed, weights of the deer, relative frequency of mule deer and white-tailed deer, and where the hunters come from are difficult to obtain. Hence, information collected during the 1946 hunting season in Lincoln County, Montana, as a by-product of a study of deer food habits, should be of interest to sportsmen and game managers.

The method used in the study was a roving check. The route traveled was from Highway 2 at a point twenty-five miles south of Libby, down the Fisher River road, known as the Wolf Creek Cutoff, to Wolf Creek, then down the old Great Northern railway grade seven and one-half miles (to the Jennings bridge), and up the grade six and one-half miles (third crossing of Wolf Creek above Baenan's). The road distance is 28 miles (Figure 1). The size of the hunting area is about 100 square miles.

When a car or camp was encountered along the route of travel a record was made of the number of hunters, their home county, and deer killed. Out-of-state hunters were listed according to their home state. A form was filled out for each deer studied, giving the following information: date, species, weight, parts missing from dressed animals, location of kill, and residence of the hunter.

Only bucks with antlers more than four inches long could be hunted. One buck was allowed to each hunter. The hunting season lasted 32 days, from October 15 to November 15.

1/ The writer wishes to express his appreciation for assistance furnished by Mr. Ben Baenen and his associates of the Baenen Hunting Lodge.

INT - FILE COPY

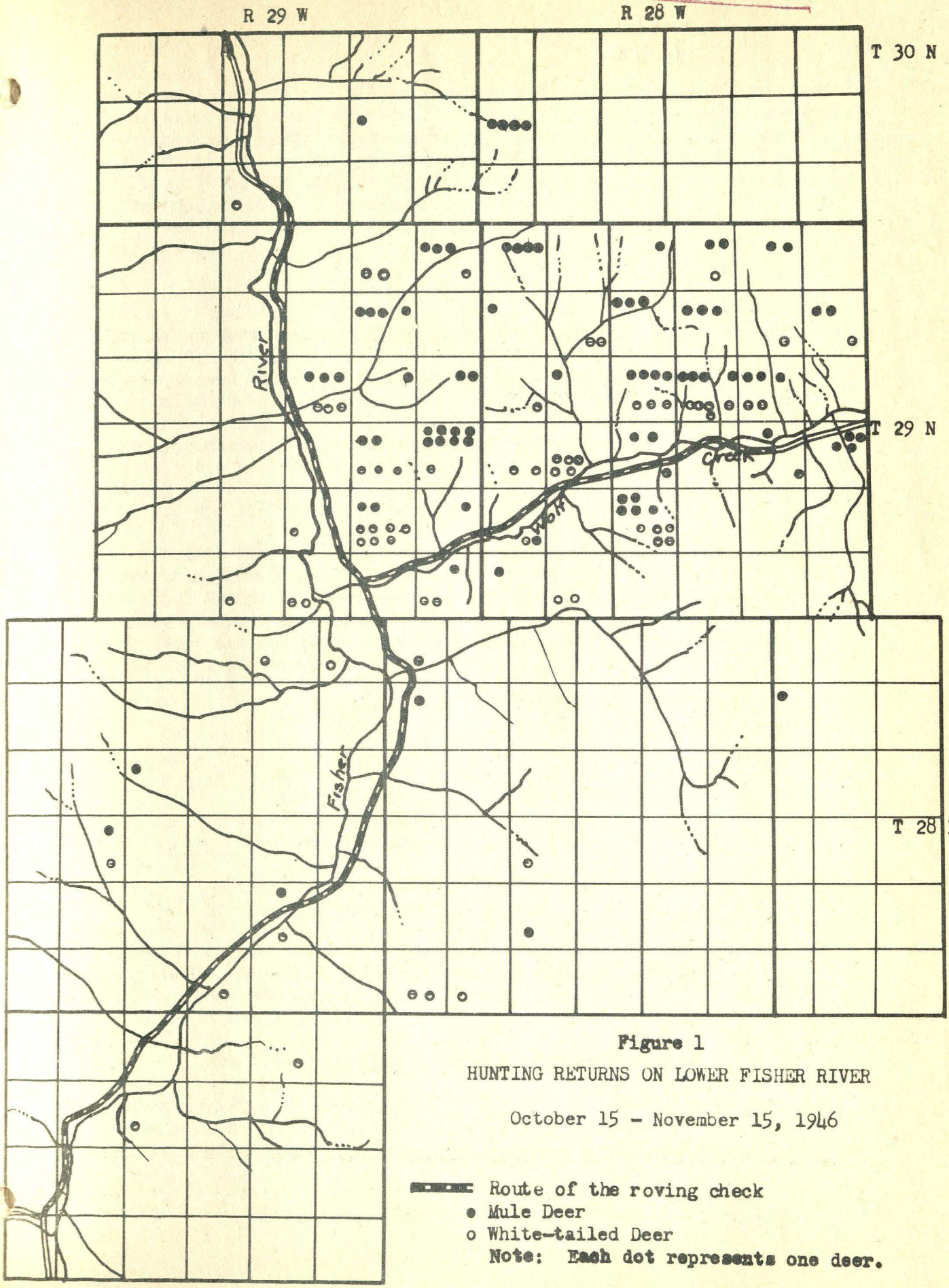

Figure 1

HUNTING RETURNS ON LOWER FISHER RIVER

October 15 - November 15, 1946

Route of the roving check
● Mule Deer
o White-tailed Deer
Note: Each dot represents one deer.

Weather was favorable for hunting during most of the season. The first ten days were warm and 2.86 inches of rain fell in this period. However, the temperature dropped and remained low during the rest of the season. Snow stayed on the ground one week and additional light snowfalls occurred on the 8th, 10th, and 14th of November but none of the new snow lasted for more than 24 hours. Hunters reported deer migrating into the lower Fisher River basin from the upper basin and from upper Wolf Creek after the first snow.

Hunters

A count of hunters was made daily along the route of travel. However, this total did not include all hunters using the area because some could easily be missed without a count at checking stations. The number missed was estimated to be 20 percent of the number counted, and that percent was added in estimating the total. The reported hunter strength is in terms of man-days, rather than total number of hunters, because all hunters camped in the area were counted every day. Man-days is a better measure of hunting pressure than actual number of hunters. The final estimate by this method was 1490 man-days of hunting.

There were more hunters from the relatively populous counties of Flathead and Lake than from Lincoln County where the hunting occurred. Two-thirds of the total hunter man-days were put in by residents of Lincoln County and nearby Flathead and Lake Counties. A list of localities from which hunters came, and the percentage of man-days contributed from each locality are given below:

Residence	Man-days hunting Percent
Flathead County	23
Lake County	23
Lincoln County	21
Pondera County	10
Out-of-State	4
Hill County	3
Sanders County	3
13 other Counties	1 each

Twenty-three percent of the hunters came from parts of Montana east of the Continental Divide. The shortest road distance to the divide is 150 miles. Some Montana hunters may have traveled 700 miles or more. This indicates the popularity of the area for deer hunting.

Numbers and Species of Deer Killed

Approximately 220 deer were killed in the lower Fisher River basin. Fifty-two percent (115) were mule deer and 48 percent (105) were white-tailed deer. These estimates were made in the same way as those of the

number of hunter-days - by adding 20 percent to the known number of deer killed. The localities where deer were killed, correct to the nearest square mile, are shown in figure 1. The mule deer were found mostly on the ridges and the white-tailed deer at lower elevations. However, the distinction in ranges of the two species is not clear-cut. There were a few white-tailed deer on the highest ridges, and mule deer occasionally were seen in the bottoms.

Most of the kills occurred in the area north of Wolf Creek on the former Wolf Creek Game Preserve which was abandoned in 1944. The former existence of a preserve in that area does not necessarily account for the large number of kills there. As the area contains excellent winter range, the deer congregate there more than in less favorable areas. The intense hunting effort north of Wolf Creek probably retards migration of deer into that area. This is of benefit to the range there in delaying its use in the fall and saving forage for use later in the winter when it is needed most.

Weight and Condition of Deer

It may be surprising to some that mule deer weighed only 8.2 pounds more than white-tailed deer on the average. The average weight of 72 mule deer when dressed (internal organs removed but skin, head, and feet attached) was 152.9 pounds as compared to 144.7 pounds for white-tailed deer. The smallest mule deer weighed 85 pounds and the smallest white-tailed deer 82 pounds. The heaviest mule deer weighed considerably more than the heaviest white-tailed deer, 260 pounds and 203 pounds respectively. Perhaps it is because individual mule deer occasionally attain sizes strikingly larger than the white-tailed deer that they are considered to be a much larger species. However, these exceptionally large individuals occur so infrequently that they have little effect on the average weight.

The distribution of the deer by 10-pound weight classes is shown in figure 2. It is interesting to note that the plotted values show two peaks of frequent occurrence for each species of deer. For example, the most numerous weights of mule deer occur in the 135 and 175 pound classes. The division suggests a separation into two age-classes, perhaps yearlings and older animals.

All of the deer were in excellent condition. They were fat and remarkably free from parasites and disease. The following parasites were found in tissue specimens submitted for examination to the U. S. Public Health Service laboratories at Hamilton, Montana.

Onchocerca cervipedes Wehr and Dikmans, a nematode worm commonly referred to as foot-worm. The infection was found in only one animal, a young white-tailed deer.

Taenia sp., a larval tapeworm was found in a cyst on the margin of the liver of a white-tailed deer. This tapeworm completes its development when eaten by a carnivore. Only one was found.

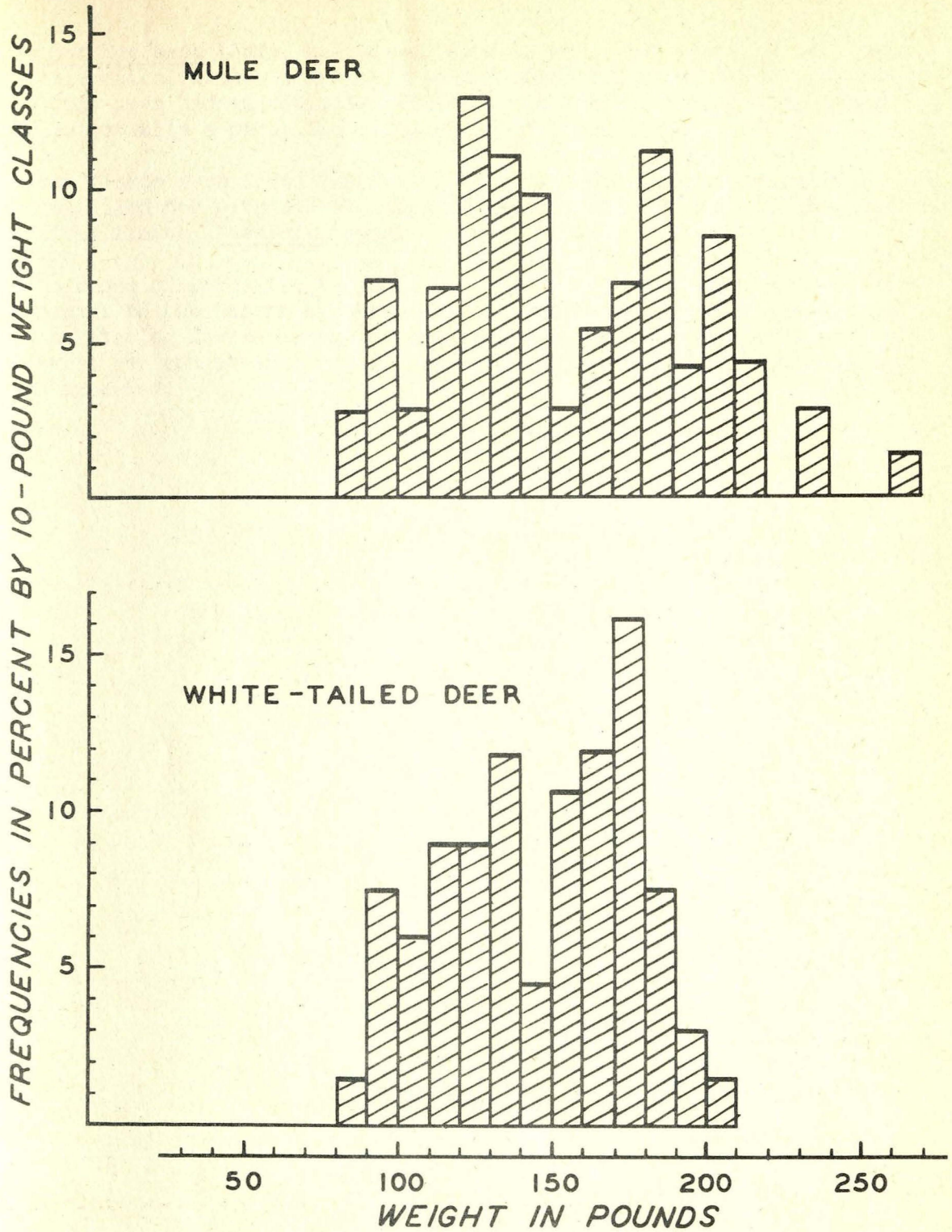

FIGURE 2

FREQUENCY DISTRIBUTIONS FOR WEIGHTS OF BUCK DEER

LINCOLN COUNTY, MONTANA

1946

Lipoptena depressa (Say), so-called "deer ticks", were found on many deer of both species, though there were seldom more than 15 or 20 on a single deer. One deer had an estimated 150 of these ectoparasites. The "deer tick" is actually a parasitic fly instead of a tick.

No liver flukes were found during the hunting season but on December 4 a white-tailed doe with a broken leg was killed and found to be infected with liver flukes, Fasciola magna.

The incidence of parasites is small and may be considered to be of little consequence to the health of the deer population as a whole. However, as the debilitating forces of the coming winter begin to take effect and the deer's resistance is lowered, greater and more serious infestations may be expected.